

REMARKS

In the Office Action mailed April 18, 2011 from the United States Patent and Trademark Office, Claims 1 and 18 were rejected on the ground of nonstatutory obvious-type double patenting. Claims 1-5, 7, 8, 13, 15, 16, 18 and 19 were rejected under 35 U.S.C. 103(a) as being unpatentable over Wells et al. (U.S. Patent 5505409) in view of Falco et al. (U.S. Patent 5133519) and in further view of Fronek et al. (U.S. Patent 5848769) and Wheeler et al. (U.S. Patent 4,455,045). Claims 9, 10, 12, and 17 were rejected under 35 U.S.C. 103(a) as being unpatentable over Wells and Falco and Fronek and Wheeler and further in view of Smith et al. (U.S. Patent 4890803). Claims 1-10, 12, 13 and 15-24 are in the pending action, claims 6 and 20-24 are withdrawn from consideration, and claims 1-5, 7-10, 12, 13, and 15-19 are rejected.

Double Patenting

In the Office Action, claims 1 and 18 were rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1, 27, and 28 of U.S. Patent No. 7,475,853. Additionally, claim 18 was rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 32 of U.S. Patent No. 7,278,825. A terminal disclaimer is filed with this response to address these rejections.

Rejections Under 35 U.S.C. § 103(a)

Applicant respectfully submits that the prior art references cited alone or in combination do not teach or suggest each of the limitations. M.P.E.P. § 2141 sets forth the *Graham* factual inquiries that should be considered when making an obviousness rejection under Section 103: 1) ascertaining the scope and content of the prior art; 2) ascertaining the differences between the claimed invention and the prior art; and 3) resolving the level of ordinary skill in the pertinent art. (Citing *Graham v. John Deere*, 383 U.S. 1, 148 USPQ 459 (1966).) In addition, M.P.E.P. §§ 2141 and 2142 set forth that “the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit.” (Citing *KSR International Co. v. Teleflex Inc. (KSR)*, 550 U.S. 398, 82 USPQ2d 1385 (2007).)

The M.P.E.P. provides several examples of rationales that can support a rejection under 35 U.S.C. § 103, namely:

- (A) Combining prior art elements according to known methods to yield predictable results;
- (B) Simple substitution of one known element for another to obtain predictable results;
- (C) Use of known technique to improve similar devices (methods, or products) in the same way;
- (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;
- (E) "Obvious to try" - choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;
- (F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art;
- (G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

(M.P.E.P. §§ 2141 & 2143, emphasis added.) As may be seen from the emphasized portions of the above potential rationales, each rationale is dependent on showing known elements from the prior art corresponding to the limitations of the claimed invention. Each rationale therefore depends on: 1) satisfying the *Graham* inquiry, showing that the scope and content of the prior art included each limitation contained in the claimed invention, and 2) satisfactorily showing that one of ordinary skill in the art would take the art teachings to overcome the identified differences under *Graham* between the claimed invention and the individual teachings of the prior art.

Applicant respectfully submits that the references cited by the Examiner, either alone or in combination, do not teach or suggest all the limitations claimed in the claim set provided herein. In particular, claim 1 recites a pressure recovery drop being perpendicular to fluid flow...[and] wherein the height of a drop face varies along the length of a given drop face, and wherein the drop face further comprises a limited length that further comprises a blended end that gradually blends into surface." Independent claim 18 is drawn to a moving body comprising similar limitations. Support for this limitation is found in lines 22-24 of paragraph [0079] of the application as originally filed. Furthermore, this limitation is illustrated at 10-c in Figure 6.

Applicant specifically notes that it would not be obvious to modify Wheeler to teach a pressure recovery drop that is perpendicular to fluid flow. Figures 1-5 of Wheeler were cited as teaching "wherein the drop face further comprises a limited length that further comprises a blended end that gradually blends into surface." Wheeler explains that the use of a pair of side

walls which converge toward each other as they progress upstream generates a pair of counter-rotating vortices, which are the aim of the Wheeler invention. (Wheeler, column 5, lines 50-65.) It would not be obvious to modify the sidewalls of Wheeler to be perpendicular to fluid flow, since it would not cause the generation of a pair of counter-rotating vortices and thus vitiate the Wheeler invention. Moreover, since Wheeler describes a combination of two or more side walls in a V-formation, it would not be obvious to use only a single side wall without the other. However, the use of the two side walls in combination with the other cited references would cause the inventions in the other cited references to be ineffective for their intended purposes. Thus, it would not be obvious to combine Wheeler with the other cited references or to modify it to teach a pressure recovery drop that is perpendicular to fluid flow. Thus, the cited references do not teach or suggest each of the limitations of the claimed invention, nor would it be obvious to modify the cited references to make up these deficiencies.

Accordingly, Applicant respectfully submits that for at least the reasons provided herein, the references cited by the Examiner, alone or in combination, do not teach or suggest all the limitations of independent claims 1 or 18. And, because the references cited by the Examiner do not teach or suggest each and every limitation of independent claims 1 or 18, Applicant respectfully submits that the prior art references do not make obvious independent claims 1 or 18, as provided herein. Because the prior art references do not make obvious independent claims 1 or 18, Applicant respectfully submits that the prior art references cited by the Examiner do not make obvious the corresponding dependent claims, which depend from independent claims 1 or 18.

CONCLUSION

Applicant submits that the amendments made herein do not add new matter and that the claims are now in condition for allowance. Accordingly, Applicant requests favorable reconsideration. If the Examiner has any questions or concerns regarding this communication, the Examiner is invited to call the undersigned.

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